

ABSTRACT

A method and apparatus for generating a series of positive and negative signals from an optical signal. The optical signal is fed into a loop of optical fiber. The loop of optical fiber is provided with a first and second directional coupler. As the optical signal circulates through the optical loop, the first and second directional coupler extract a percentage of light from the optical signal, and couple the extracted light to a photodetector which converts the extracted light into electrical energy. The present invention also provides an impulse cancellation line. The impulse cancellation line is provided to neutralize the problematic initial light extracted from the optical signal in the first directional coupler and coupled to the photodetector. However, as the optical signal continues to circulate through the optical loop, the extracted light is not neutralized.